IN THE CLAIMS

The claims are amended as follows:

1. (currently amended) A voltage verification system for an electrical system, comprising:

a processor unit coupleable to a voltage detection system in an electrical enclosure, the voltage detection system configured to detect a first voltage input to the enclosure and a second voltage at a point within the enclosure, wherein at least one of the voltage detection system and the processor unit is operable to convert ~~a voltage~~ the first and second voltages detected by the voltage detection system into [[a]] digital ~~signal~~ signals, the processor unit being operable to provide an output derived from a truth table such that a first signal is provided for opening the enclosure only if the first voltage is substantially non-zero and the second voltage is substantially zero~~representative of an operational condition of the electrical system based on the digital signal and data stored in the processing unit~~.

2. (currently amended) The system as recited in claim 1, comprising the voltage detection system, wherein the voltage detection system is operable to detect a plurality of voltages within the enclosure and to provide [[a]] ~~signal~~ signals representative thereof to the processor unit, and wherein the processor unit provides the output based upon a truth table that includes the plurality of voltages.

3. (original) The system as recited in claim 2, wherein the voltage detection system is electrically coupled to the processor unit.

4. (original) The system as recited in claim 2, wherein the voltage detection system is optically coupled to the processor unit.

5. (original) The system as recited in claim 2, wherein the voltage detection system comprises at least one contact voltage detector.

6. (original) The system as recited in claim 2, wherein the voltage detection system comprises at least one non-contact voltage detector.

7. (currently amended) The system as recited in claim 1, wherein the ~~data stored in the processing unit~~ truth table comprises a defined output representative for ~~of an operational condition for~~ each possible combination of voltages detected by the voltage detection system ~~values for the digital signal~~.

8. (currently amended) The system as recited in claim 1, wherein the output ~~at least one operational condition~~ corresponds to a loss of electrical continuity between a plurality of components of the electrical system.

9. (currently amended) An electrical system, comprising:

an electrical connection point ~~connector~~ operable to connect an electrical device to an external source of power; ~~and~~

a switch electrically coupled to the electrical system connection point; and

a voltage verification system operable to detect voltage at a location upstream of the electrical connection point ~~connector~~ and at a location downstream of the switch ~~electrical connector~~ and to provide a positive indication if a no-voltage condition is detected at at least one of the location upstream of the electrical connection point ~~connector~~ and the location downstream of the switch ~~electrical connector~~.

10. (canceled)

11. (currently amended) The system as recited in claim 9 [[10]], comprising a short-circuit preventing device, wherein the voltage verification system is operable to detect voltage at a location downstream of the short-circuit preventing device.

12. (original) The system as recited in claim 11, wherein the voltage verification system provides a positive indication that the electrical device is de-energized when voltage is detected at the location upstream of the electrical connector and no voltages are detected at the location downstream of the switch and downstream of the short-circuit preventing device.

13. (original) The electrical device as recited in claim 11, wherein the voltage verification system comprises a logic circuit and the voltage verification system is adapted to convert each voltage detected into an input to the logic circuit.

14. (original) The electrical device as recited in claim 13, wherein the logic circuit is programmed to produce a defined output corresponding to each possible combination of inputs to the logic circuit.

15. (currently amended) The electrical device as recited in claim 9 [[10]], wherein the voltage verification system comprises an indicator disposed on the exterior of the electrical device, the indicator being operable to produce a visible indication corresponding to each of the plurality of outputs.

16. (currently amended) An electrical system, comprising:

an enclosure;

an electrical device housed within the enclosure and electrically coupled to a power line through the enclosure;

a voltage verification system operable to produce a digital signal representative of line voltage applied ~~detected at a location external~~ to the enclosure and at plurality of

locations internal to the enclosure, wherein the voltage verification system is operable to process the digital signals ~~signal~~ to produce an output based on a truth table defining possible states of the line voltage and voltage at the plurality of locations ~~an algorithm stored within the voltage verification system~~.

17. (original) The system as recited in claim 16, wherein the power line comprises a three-phase power bus.

18. (currently amended) The system as recited in claim 17, wherein the electrical device comprises a motor controller electrically coupleable to the three-phase power bus to couple three-phase power to an electric motor.

19. (currently amended) The system as recited in claim 17, wherein the electrical device comprises a switch operable to selectively isolate the electrical device from the three-phase power bus, and within the plurality of locations includes locations upstream and downstream of the device.

20. (currently amended) The system as recited in claim 19, wherein the electrical device comprises a switch operable to selectively isolate ~~the~~ a downstream electrical device from the three-phase power bus, and within the plurality of locations includes locations upstream and downstream of the device.

21. (original) The system as recited in claim 20, wherein the voltage verification system is operable to detect voltage in each phase of the three-phase power bus and in each phase downstream of the switch.

22. (original) The system as recited in claim 20, comprising a short-circuit preventing device located in each phase downstream of the switch, the voltage verification system being operable to detect voltage in each phase between the switch and the short-circuit preventing device in each phase downstream of each short-circuit preventing device.

23. (currently amended) The system as recited in claim [[20]] 16, wherein the voltage verification system comprises a bus voltage module disposed within the enclosure and a first voltage sensor located external to the enclosure to provide a signal representative of line voltage to the module, the module being electrically isolated from the power line.

24. (original) The system as recited in claim 23, wherein the first voltage sensor comprises a light emitter and the module comprises a light receiver.

25. (original) The system as recited in claim 23, wherein the first voltage sensor is a non-contact voltage sensor.

26. (original) The system as recited in claim 23, wherein the voltage verification system comprises a plurality of voltage sensors disposed within the electrical device and electrically coupled to the module.

27. (original) The voltage verification system as recited in claim 23, wherein the voltage verification system comprises a logic module coupled to the bus voltage module, the logic module being programmed to produce a specific output for each possible value of the digital signal.

28. (original) The motor control center as recited in claim 27, wherein the voltage verification system is coupleable to a communications network to provide the specific output to the communications network.

29. (currently amended) A method of accessing the interior of an electrical device coupled to power, comprising:

viewing a positive indication provided by a voltage verification system that no hazardous voltages are present within the electrical device, the indication being generated based upon voltages sensed within the device and a truth table of possible states of the voltages; and

opening an access into the interior of the electrical device after viewing the positive indication that no hazardous voltages are present within the device based upon the truth table.

30. (original) The method as recited in claim 29, wherein the positive indication represents that the system detected a voltage upstream of an isolation switch and detected no voltage downstream of the isolation switch.

31. (original) The method as recited in claim 29, comprising entering the interior of the electrical device.

32. (new) A method of accessing the interior of an electrical device coupled to power, comprising:

detecting voltage input to the device and at a plurality of locations within the device; and

generating an output signal based upon a truth table of possible states of the input voltage and voltage at the plurality of locations.

33. (new) The method of claim 32, wherein the output signal is indicative of a desired condition for accessing the interior of the electrical device where the input voltage is present and voltage at a selected location within the device is absent.

34. (new) The method of claim 32, further comprising providing a visual indication of a desired condition for accessing the interior of the electrical device based upon the output signal.

35. (new) The method of claim 32, further comprising providing a visual indication of an undesired condition for accessing the interior of the electrical device based upon the output signal.